T09T50 96559860

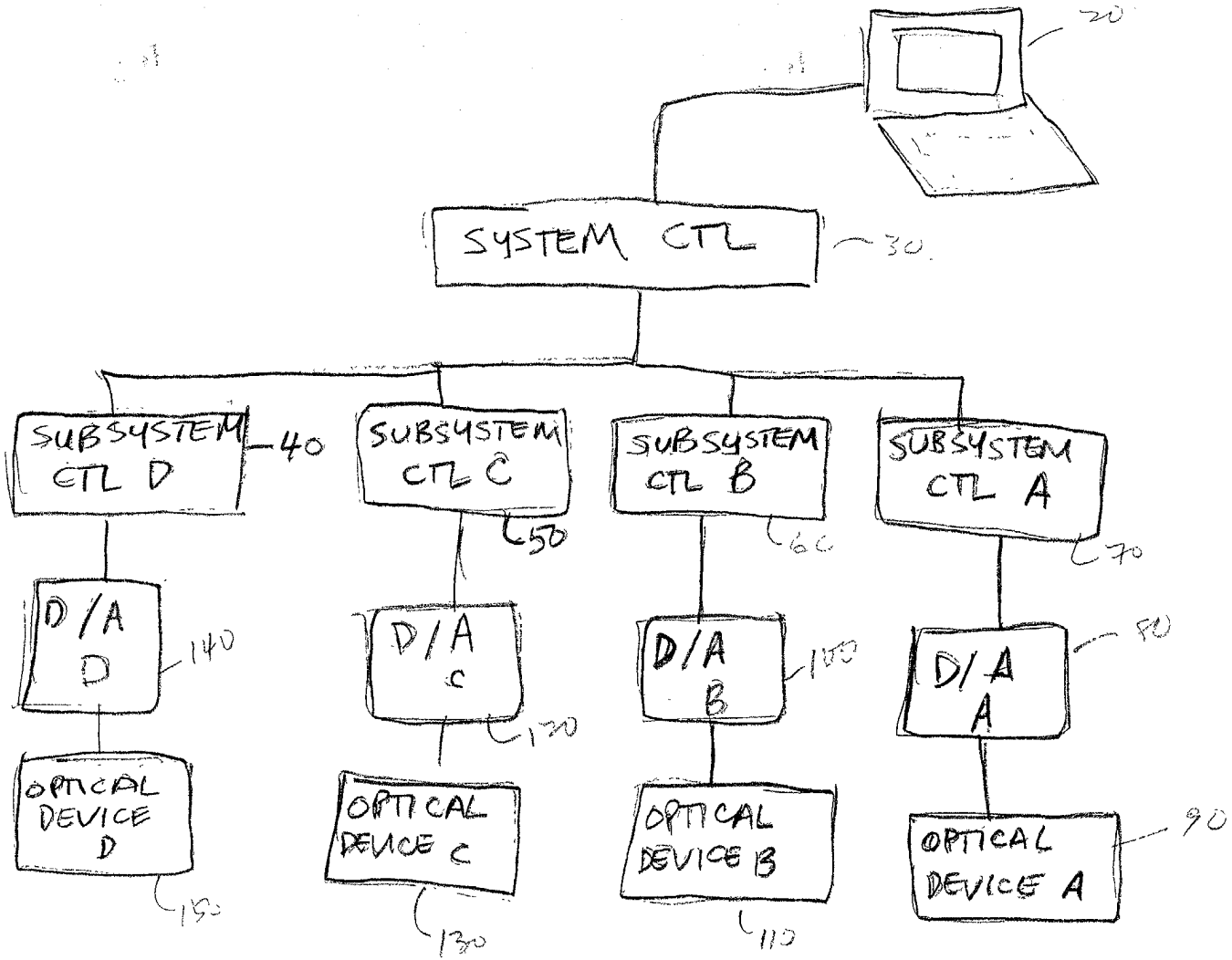

FIG 1

T09T50" 96555860

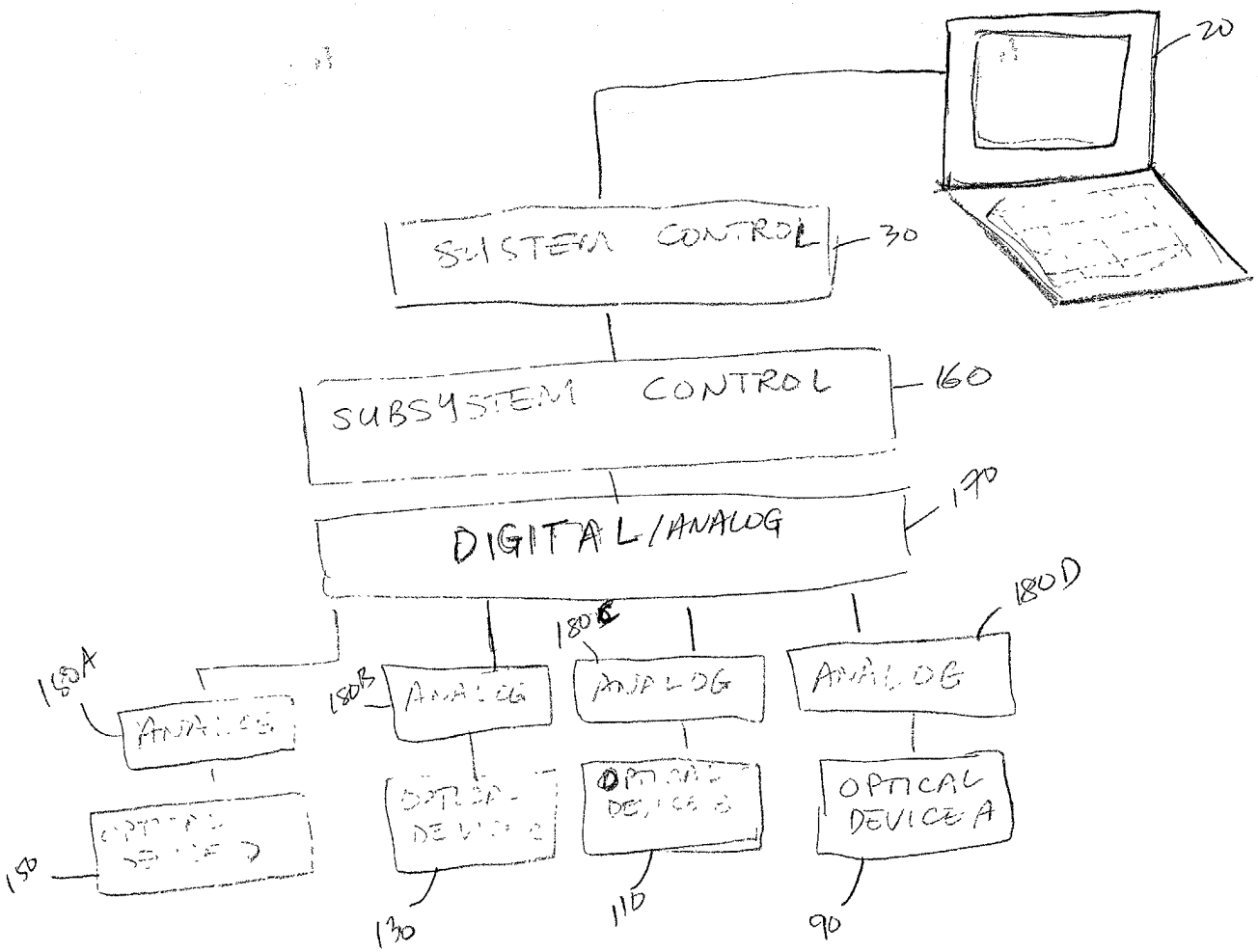

FIG 2

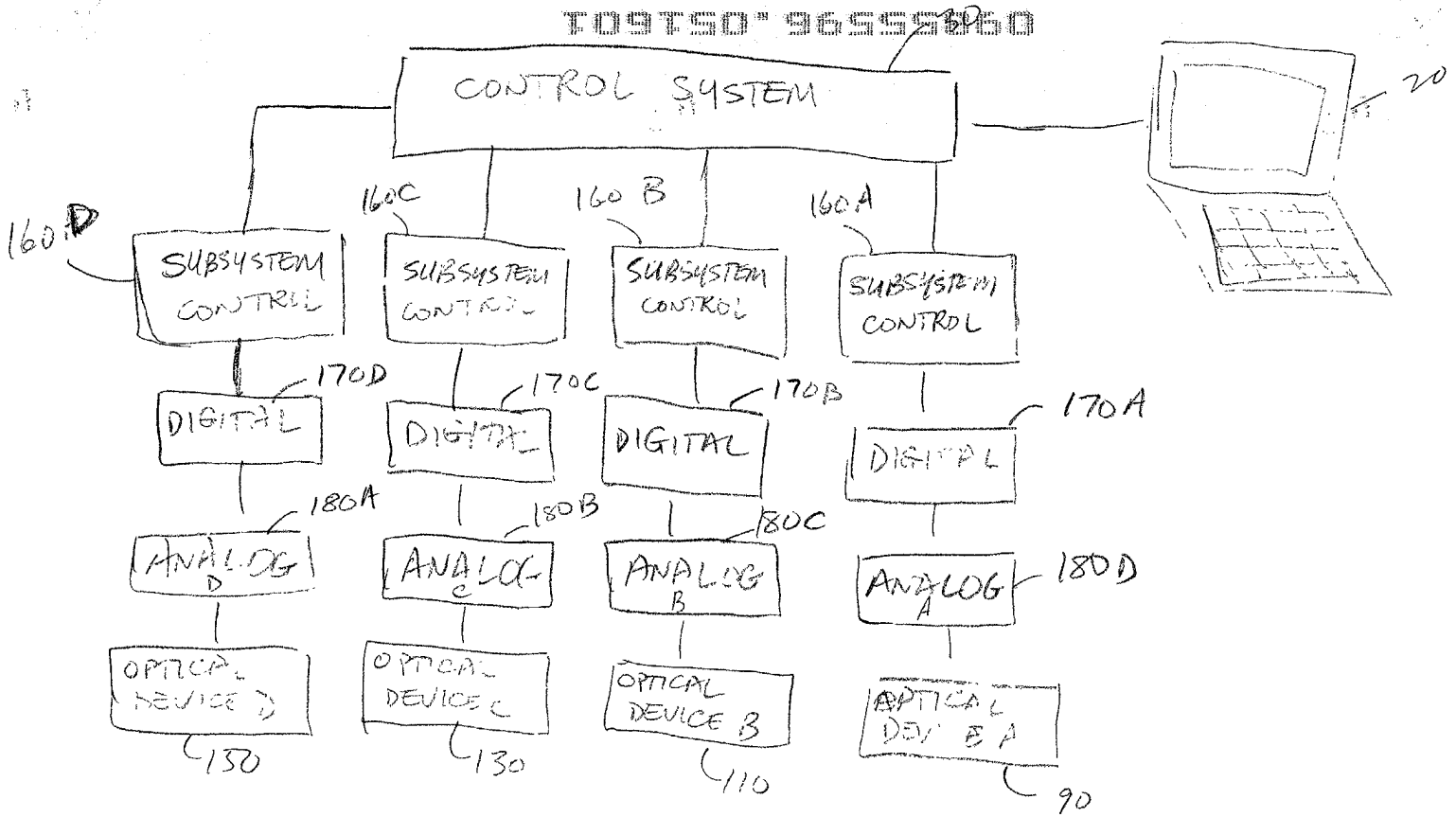
CONTROL SYSTEM
20
160D
160C
160B
160A
SUBSYSTEM CONTROL
SUBSYSTEM CONTROL
SUBSYSTEM CONTROL
SUBSYSTEM CONTROL
170D
170C
170B
170A
DIGITAL
DIGITAL
DIGITAL
DIGITAL
180A
180B
180C
180D
ANALOG D
ANALOG C
ANALOG B
ANALOG A
OPTICAL DEVICE D
OPTICAL DEVICE C
OPTICAL DEVICE B
OPTICAL DEVICE A
150
130
110
90

FIG 3

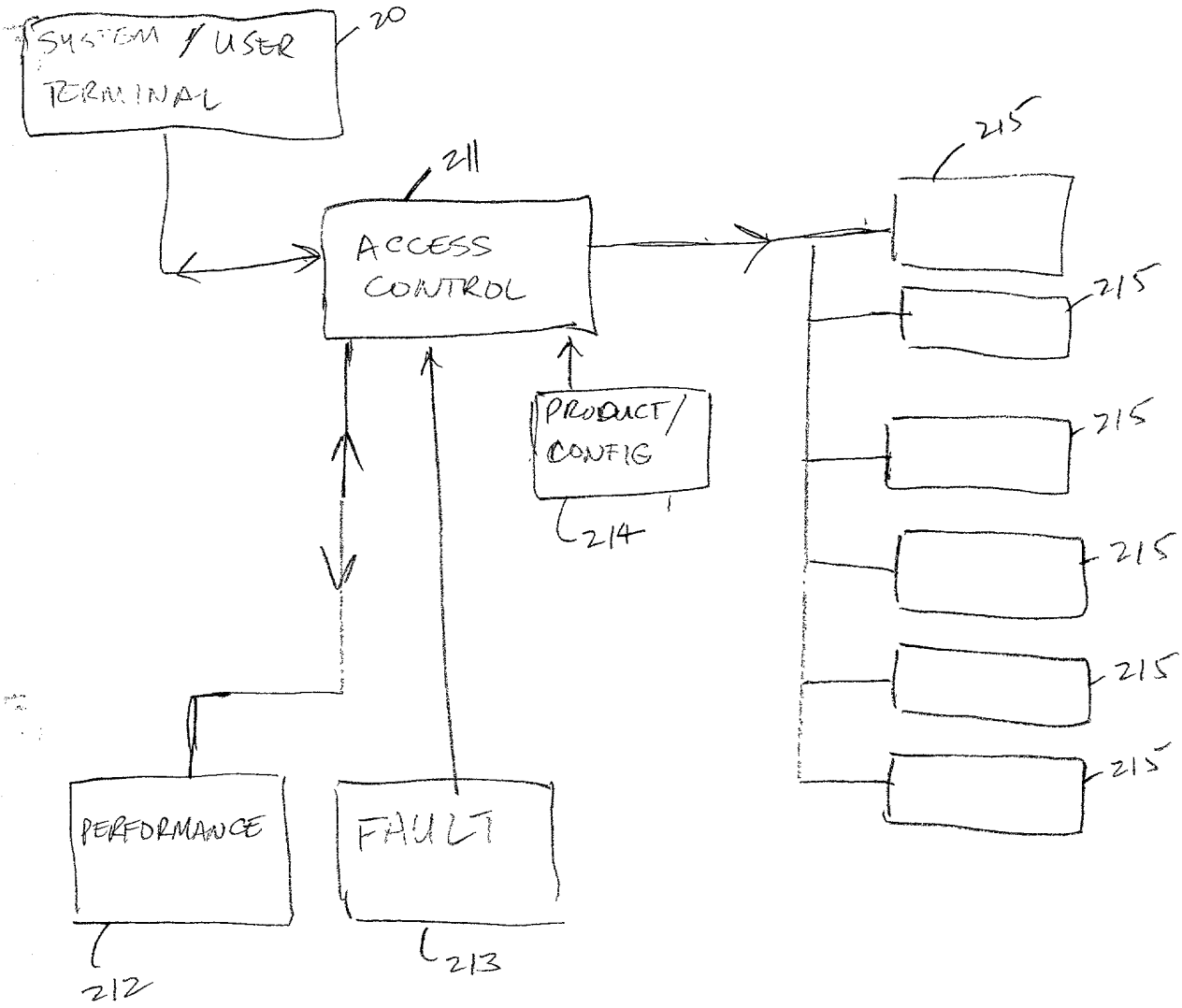

FIG 3A

D9555556 : 05/16/06

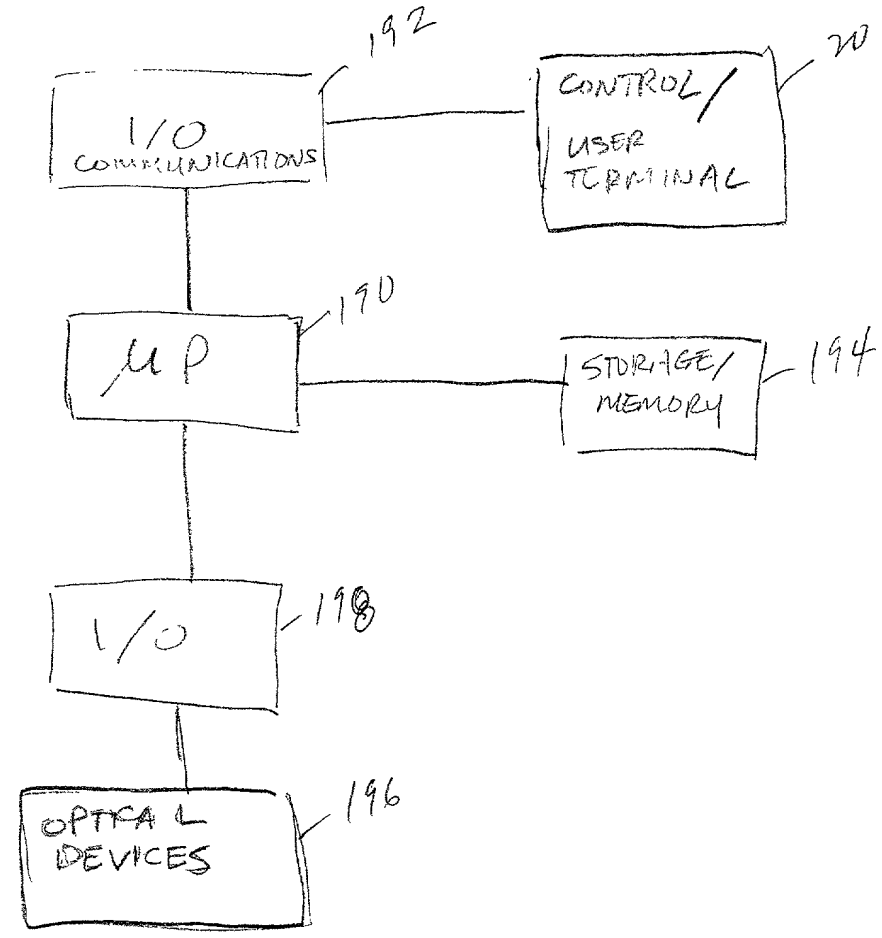
192
I/O COMMUNICATIONS
CONTROL / USER TERMINAL
20
190
μP
STORAGE / MEMORY
194
I/O
198
OPTICAL DEVICES
196

FIG 3B

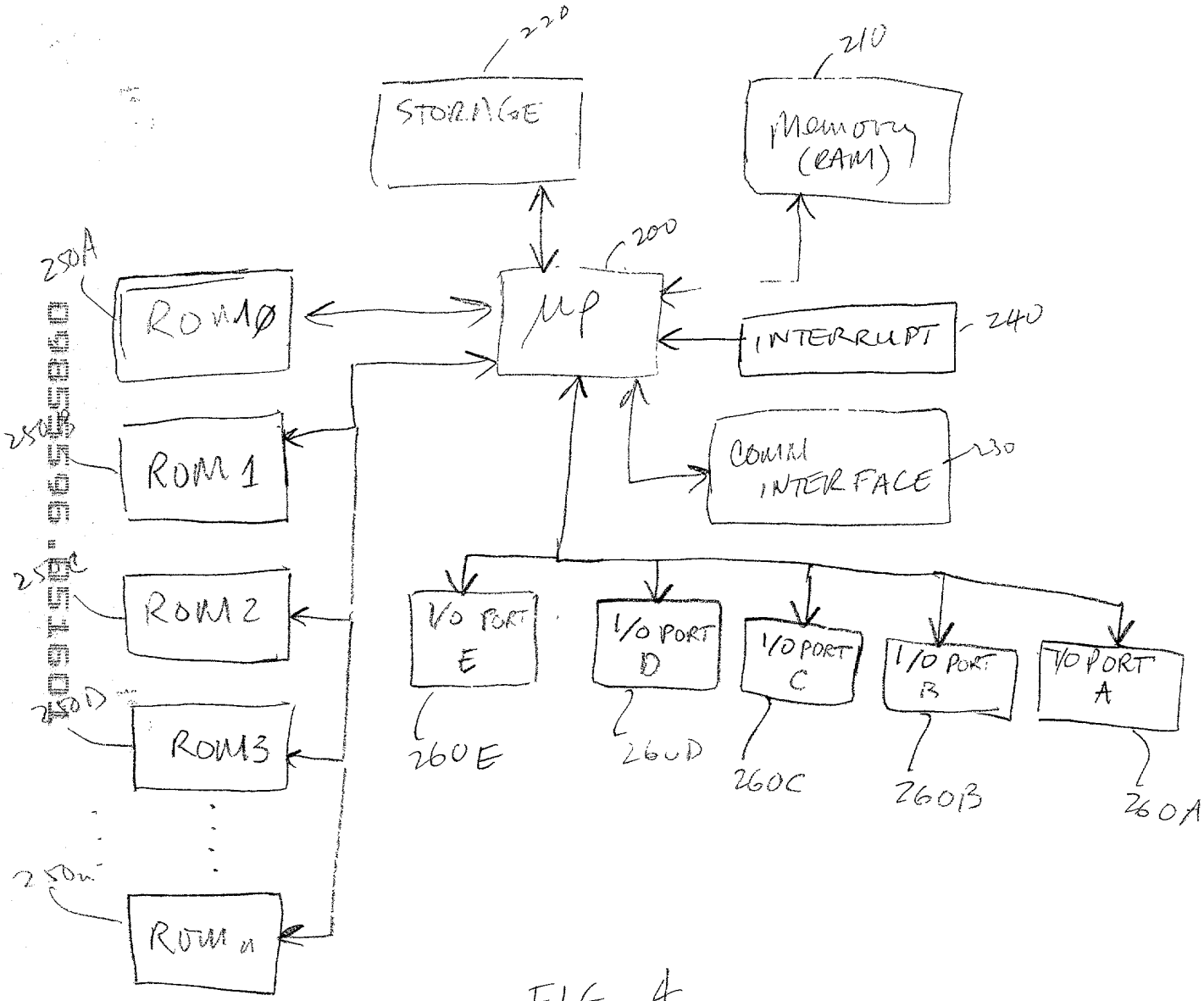
220
STORAGE
210
MEMORY (RAM)
200
μP
INTERRUPT
240
COMM INTERFACE
230
250A
ROM 0
250B
ROM 1
250C
ROM 2
250D
ROM 3
250n
ROM n
I/O PORT E
I/O PORT D
I/O PORT C
I/O PORT B
I/O PORT A
260E
260D
260C
260B
260A

FIG 4

TOSTSO 96555360

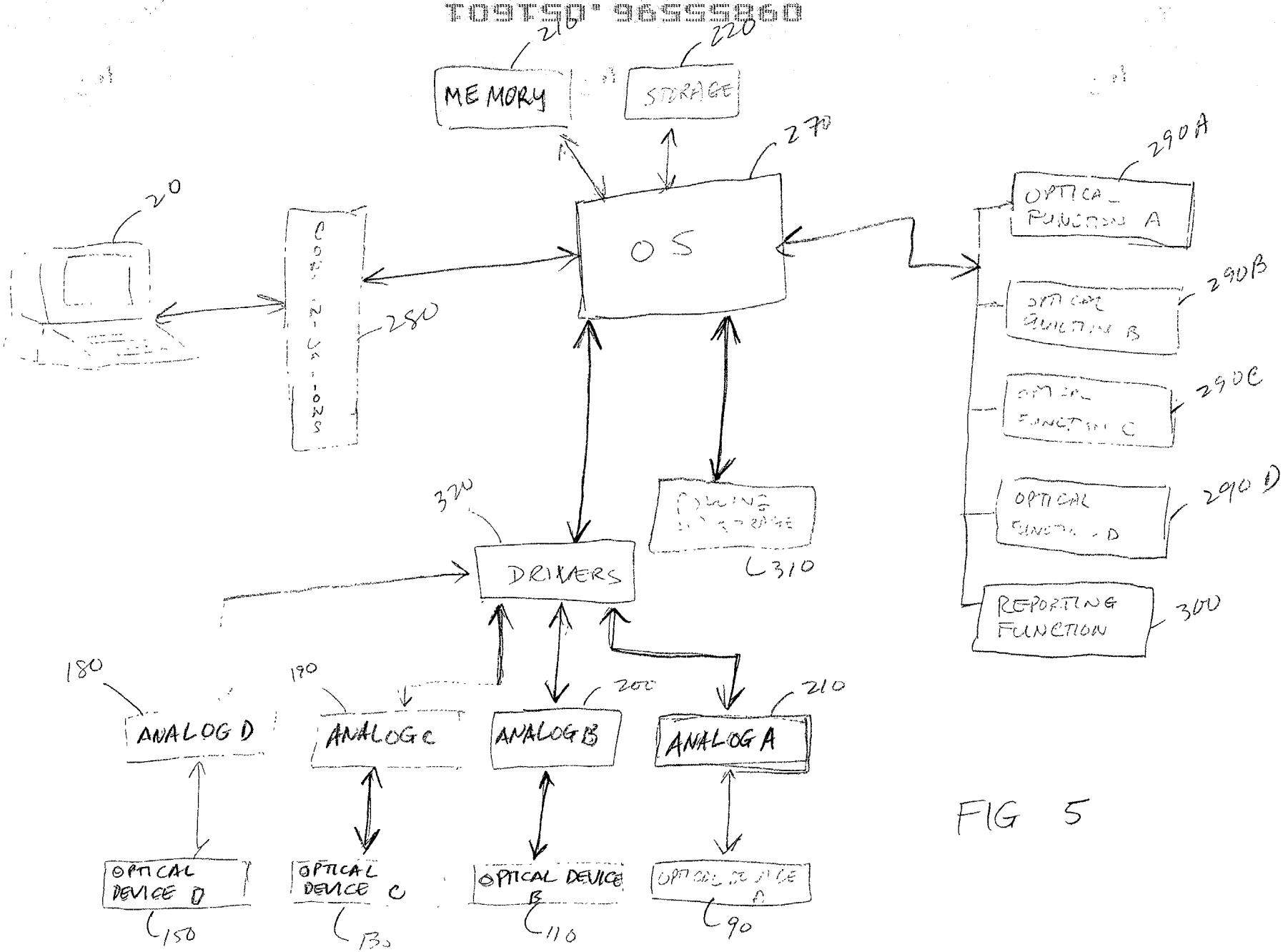

FIG 5

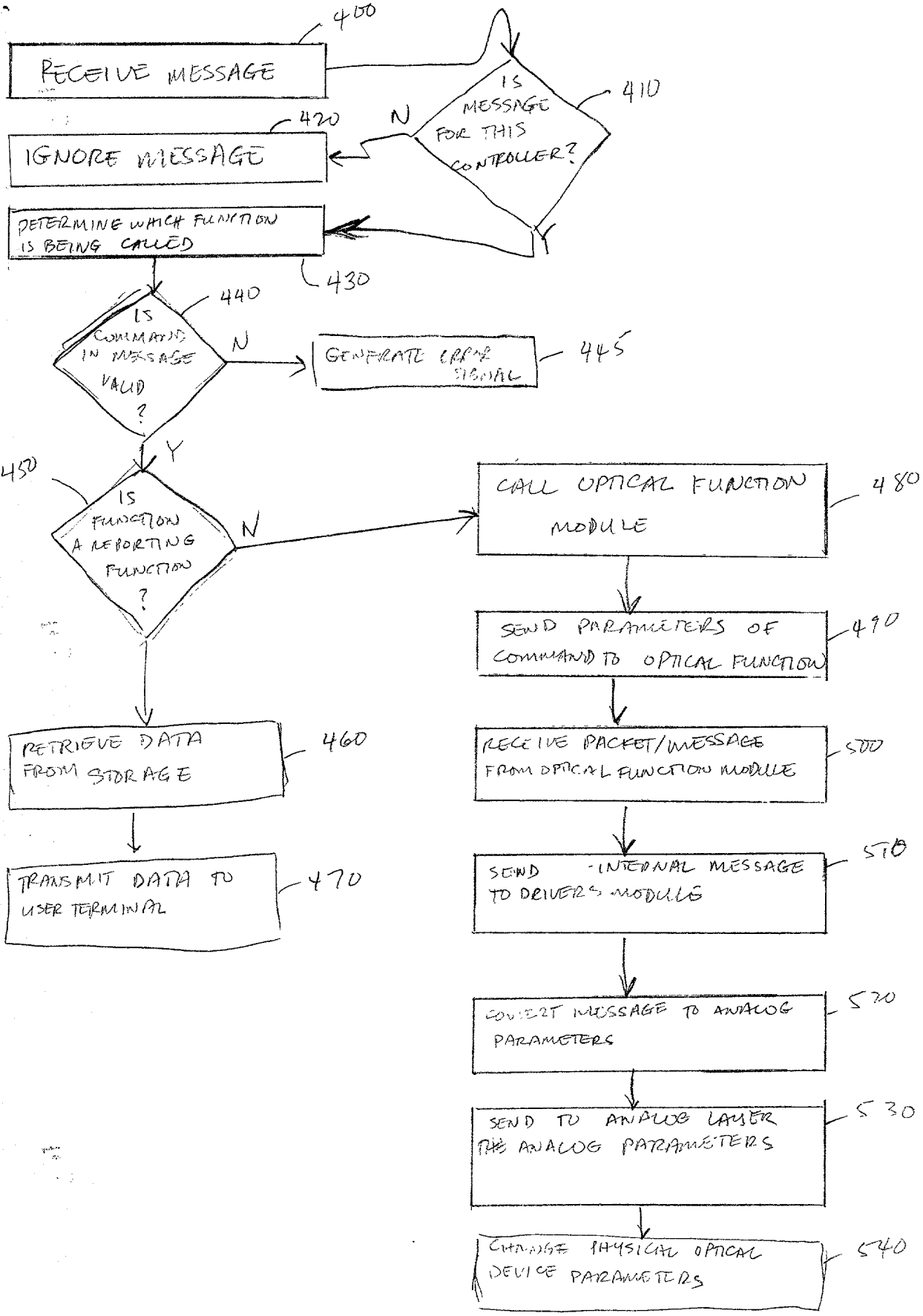
400
RECEIVE MESSAGE
410
IS MESSAGE FOR THIS CONTROLLER?
N
420
IGNORE MESSAGE
DETERMINE WHICH FUNCTION IS BEING CALLED
430
440
IS COMMAND IN MESSAGE VALID ?
N
GENERATE ERROR SIGNAL
445
Y
450
IS FUNCTION A REPORTING FUNCTION ?
N
CALL OPTICAL FUNCTION MODULE
480
SEND PARAMETERS OF COMMAND TO OPTICAL FUNCTION
490
RETRIEVE DATA FROM STORAGE
460
RECEIVE PACKET/MESSAGE FROM OPTICAL FUNCTION MODULE
500
TRANSMIT DATA TO USER TERMINAL
470
SEND INTERNAL MESSAGE TO DRIVERS MODULE
510
CONVERT MESSAGE TO ANALOG PARAMETERS
520
SEND TO ANALOG LAYER THE ANALOG PARAMETERS
530
CHANGE PHYSICAL OPTICAL DEVICE PARAMETERS
540

FIG. 6

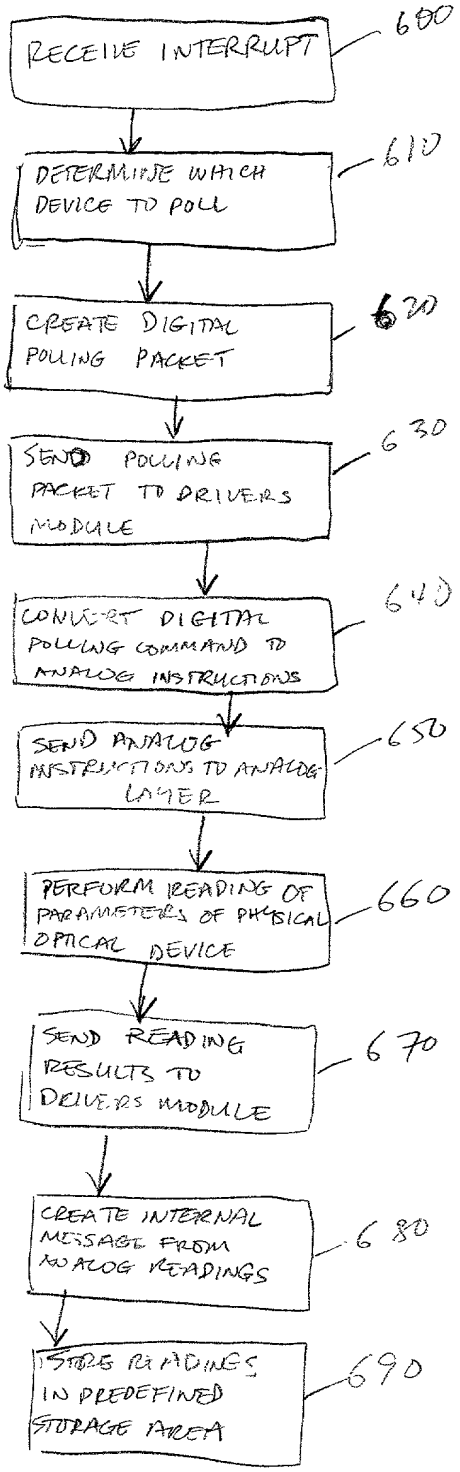
RECEIVE INTERRUPT
600
DETERMINE WHICH DEVICE TO POLL
610
CREATE DIGITAL POLLING PACKET
620
SEND POLLING PACKET TO DRIVERS MODULE
630
CONVERT DIGITAL POLLING COMMAND TO ANALOG INSTRUCTIONS
640
SEND ANALOG INSTRUCTIONS TO ANALOG LAYER
650
PERFORM READING OF PARAMETERS OF PHYSICAL OPTICAL DEVICE
660
SEND READING RESULTS TO DRIVERS MODULE
670
CREATE INTERNAL MESSAGE FROM ANALOG READINGS
680
STORE READINGS IN PREDEFINED STORAGE AREA
690

FIG. 7.

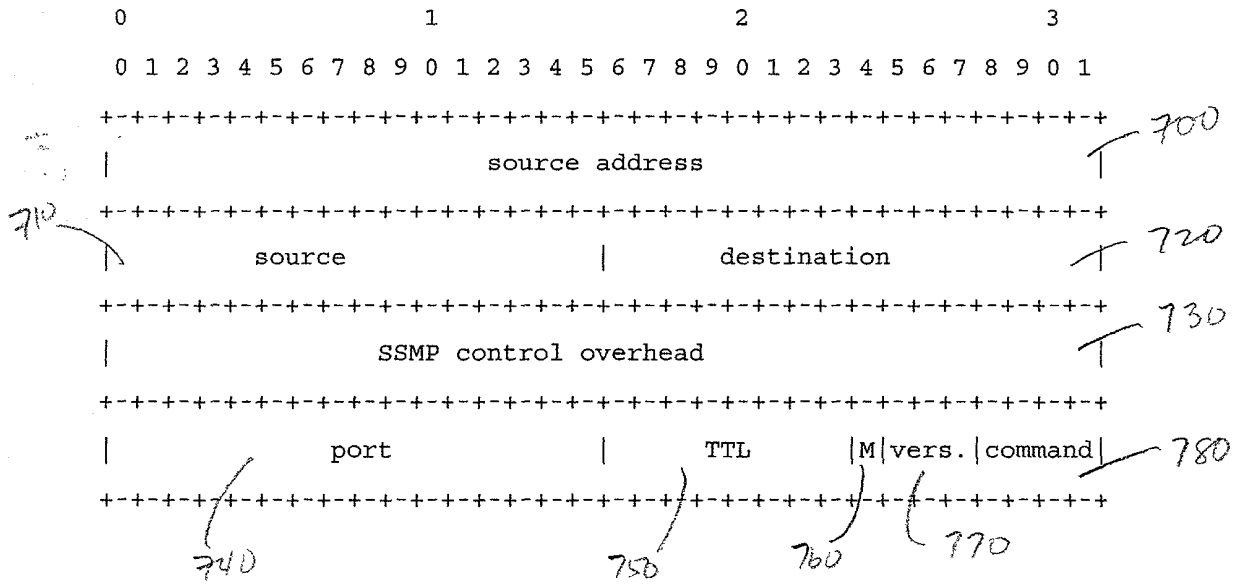
0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
source address
source
destination
SSMP control overhead
port
TTL
M
vers.
command
700
710
720
730
740
750
760
770
780

Fig 8

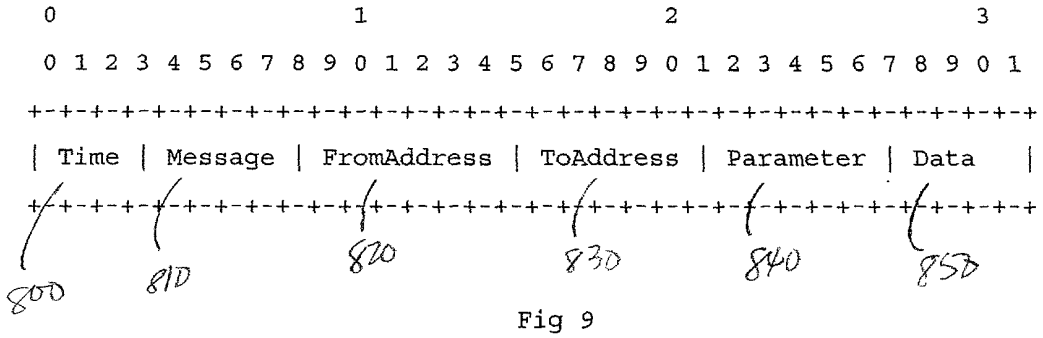
0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
Time
Message
FromAddress
ToAddress
Parameter
Data
800
810
820
830
840
850

Fig 9